

# **Historic, Archive Document**

Do not assume content reflects current  
scientific knowledge, policies, or practices.



1.96  
R31F50  
cop. 2

# Water Supply Outlook For Oregon



SOIL CONSERVATION SERVICE  
U.S. DEPARTMENT OF AGRICULTURE

Cooperating with

OREGON DEPARTMENT OF WATER RESOURCES

AS OF  
MAR. 1, 1979



## TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water and other parameters at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

*COVER PHOTO: VIEW OF A SNOTEL DATA SITE IN THE SNOWY RANGE IN WYOMING. TALL CYLINDRICAL DEVICE IS A PRECIPITATION GAGE. SNOW PILLOWS ON THE GROUND NOT VISIBLE DUE TO SNOW COVER. SHELTER HOUSE, ANTENNA TOWER, ANTENNA, AND TEMPERATURE UNIT ARE VISIBLE BEHIND THE PRECIPITATION GAGE.*

## PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, West Technical Service Center, Room 510, 511 N.W. Broadway, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	Room 129, 2221 East Northern Lights Blvd., Anchorage, Alaska 99504
Arizona	Room 3008, Federal Building, 230 N. First Ave., Phoenix, Arizona 85025
Colorado (N. Mex.)	P. O. Box 17107, Denver, Colorado 80217
Idaho	Room 345, 304 N. 8th. St., Boise, Idaho 83702
Montana	P. O. Box 98, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno, Nevada 89505
Oregon	1220 S. W. Third Ave., Portland, Oregon 97204
Utah	4420 Federal Bldg., 125 South State St., Salt Lake City, Utah 84138
Washington	360 U. S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 2440, Casper, Wyoming 82602

## PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Snow Surveys Branch, California Department of Water Resources, P.O. Box 388, Sacramento, California 95802 --- for British Columbia by the Ministry of the Environment, Water Investigations Branch, Parliament Buildings, Victoria, British Columbia V8V 1X5 --- for Yukon Territory by the Department of Indian and Northern Affairs, Northern Operations Branch, 200 Range Road, Whitehorse, Yukon Territory Y1A 3V1 --- and for Alberta, Saskatchewan, and N.W.T. by the Water Survey of Canada, Inland Waters Branch, 110-12 Avenue S.W., Calgary, Alberta T3C 1A6.



# **WATER SUPPLY OUTLOOK FOR OREGON**

and  
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

*Issued*

MARCH 1, 1979

*Issued by*

**R. M. DAVIS**

ADMINISTRATOR  
SOIL CONSERVATION SERVICE  
WASHINGTON D C

*Released by*

**GUY W. NUTT**

STATE CONSERVATIONIST  
SOIL CONSERVATION SERVICE  
PORTLAND OREGON

*In Cooperation with*

OREGON  
DEPARTMENT  
OF  
WATER RESOURCES

*Report prepared by*

TOMMY A. GEORGE, Snow Survey Supervisor  
RONALD A. JONES, Asst. Snow Survey Supervisor  
WILLIAM E. WOOLCOCK, Hydrologic Technician

SOIL CONSERVATION SERVICE  
1220 S.W. THIRD AVENUE  
PORTLAND, OREGON 97204



# TABLE OF CONTENTS

PAGE

STREAMFLOW PROSPECTS FOR OREGON.....(MAP)..... FACING PAGE 1

WATER SUPPLY OUTLOOK FOR OREGON..... 1

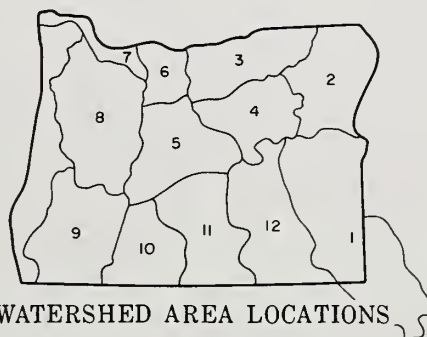
## DETAILED WATER SUPPLY OUTLOOK BY MAJOR WATERSHED AREAS

AREA 1	OWYHEE, MALHEUR.....	3
AREA 2	BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA.....	5
AREA 3	UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY.....	7
AREA 4	UPPER JOHN DAY.....	9
AREA 5	UPPER DESCHUTES, CROOKED.....	11
AREA 6	HOOD, MILE CREEKS, LOWER DESCHUTES.....	13
AREA 7	LOWER COLUMBIA.....	15
AREA 8	WILLAMETTE.....	17
AREA 9	ROGUE, UMPQUA.....	19
AREA 10	KLAMATH.....	21
AREA 11	LAKE COUNTY, GOOSE LAKE.....	23
AREA 12	HARNEY BASIN.....	25

BASIC DATA SUPPLEMENTS	I	SNOW
	II	SOIL MOISTURE
	III	PRECIPITATION

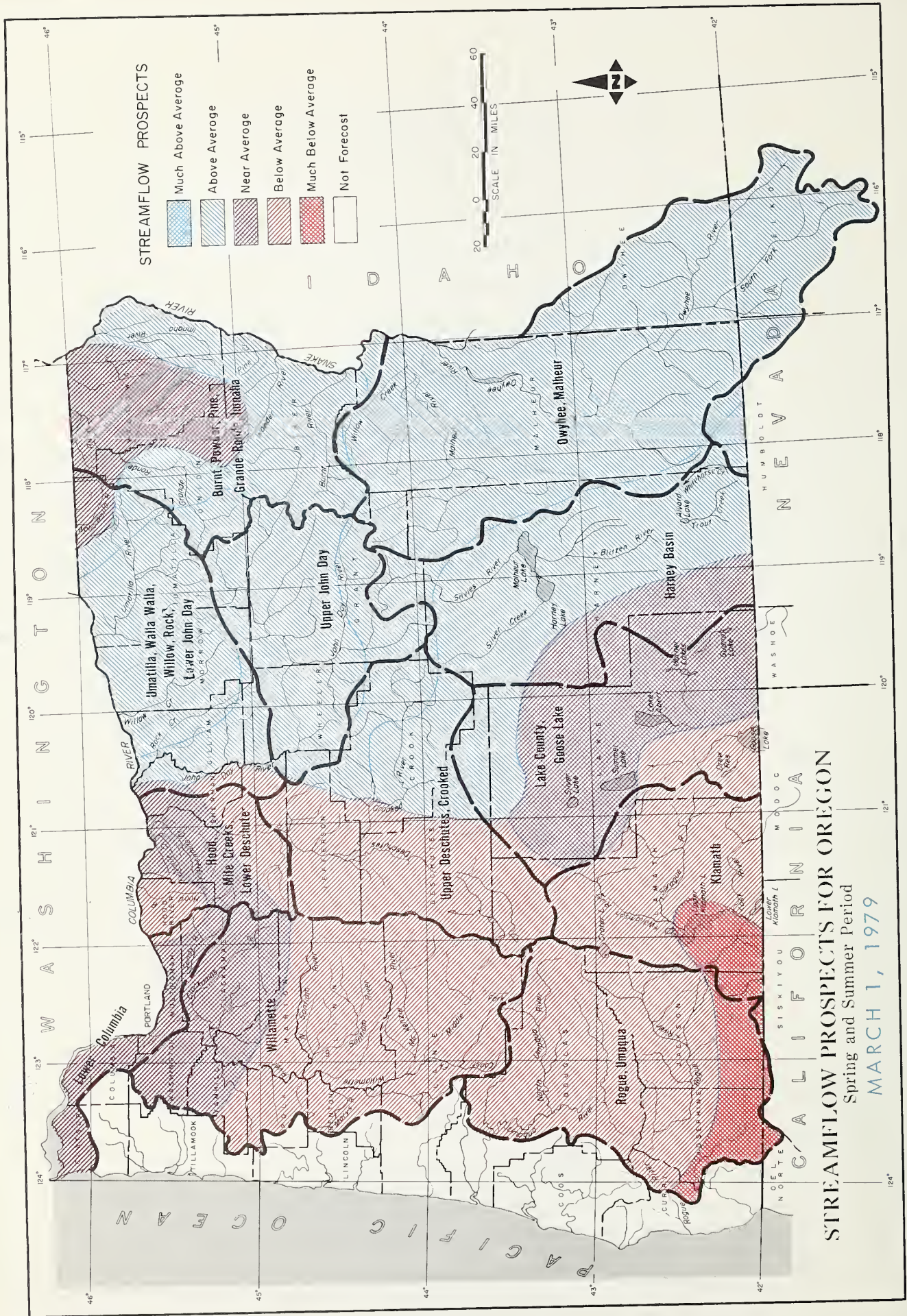
MAP AND INDEX OF OREGON SNOW COURSES.....(MAP)

LIST OF COOPERATORS.....INSIDE BACK COVER



WATERSHED AREA LOCATIONS







# WATER SUPPLY OUTLOOK AND SUMMARY FOR OREGON

M A R C H 1, 1 9 7 9

\*\*\*\*\*  
\* Unusually heavy amounts of snow fell in Oregon's mountains during \*  
\* February. As a result the water supply outlook has improved \*  
\* dramatically from last month. Adequate supplies are forecast for \*  
\* all of Oregon except for those streams which originate in the \*  
\* southern Cascades where summer streamflow is expected to be below \*  
\* average. \*  
\* \*\*\*\*\*

## SNOW COVER

The mountain snowpack is much above average in Malheur County, the Blue Mountains above Pendleton and in the headwaters of the Crooked River. It is above normal on the Burnt, Powder, John Day and Silvies drainages and in the Steens mountains in Harney County. A near average snowpack exists in the Wallowa mountains and northern Cascades around Mt. Hood. Below average snow cover exists in the central Cascades and a poor snowpack still persists in the southern Cascades and the Siskiyou's.

## PRECIPITATION

Valley precipitation during the November-February winter period has been 80 to 110% of average in Eastern Oregon and 60 to 70% of average in Western Oregon. Storms were plentiful during the month of February and provided the state with much above normal precipitation in all areas. Amounts ranged from 120% of average on the Lower John Day up to 190% on the Hood River.

## SOIL MOISTURE

Soil moisture beneath the snowpack is still below normal in most areas. This is due to the very dry fall and early winter experienced up to when the snowpack started to accumulate. These dry soils will absorb more snow melt than usual.

## RESERVOIR STORAGE

Reservoir storage is close to normal for March 1 in most of the major irrigation reservoirs. Twenty-seven reservoirs are currently storing 2,017,000 acre feet compared to the normal of 2,192,000 acre feet.

## STREAMFLOW

Most streams flowed at above average amounts during February. Streams originating in areas where the precipitation was received as snow flowed at much below normal amounts.

Forecasts of prospective streamflows on representative Oregon streams are as follows:

<u>STREAM</u>	<u>PERIOD</u>	<u>FORECAST</u> <u>% of 1958-72 AVG.</u>
Owyhee net Inflow	Mar.-July	168
Malheur nr. Drewsey	Mar.-July	128
Deschutes at Benham Falls	Apr.-July	80
Grande Ronde at La Grande	Mar.-July	120
Willamette, Mid. Fk. nr. Oakridge	Apr.-July	86
Upper Klamath Lake net Inflow	Mar.-July	70
Rogue nr. Raygold	Apr.-July	76
Silvies nr. Burns	Mar.-July	128



This report contains data furnished by the Oregon Department of Water Resources, U.S. Geological Survey, NOAA National Weather Service and other cooperators.

[illegible]



## STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average <sup>c</sup>
Bully Creek at Warm Springs	20	145	Mar.-May		13.9
Malheur near Drewsey	120	128	Mar.-July		94
	92	128	Apr.-Sept.		72
Malheur, North Fork at Beulah	95	132	Mar.-July		72
	83	130	Apr.-Sept.		64
Owyhee Reservoir net Inflow	724	168	Mar.-July	676	431
	546	164	Apr.-Sept.	456	332

## FORECAST DATE of LOW FLOW VALUES

FORECAST POINT	Low Flow Value Second/Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
Owyhee near Rome	1000 250	June 15 July 10	May 24 June 20

## RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average <sup>c</sup>
Beulah Reservoir	60.0	20.0	22.1	34.2
Bully Creek	30.0	11.7	20.9	15.8
Owyhee	715.0	599.8	310.4	516.8
Warm Springs	191.0	87.6	40.9	108.2

## SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average <sup>c</sup>
Malheur River	2	85	93

## SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average <sup>c</sup>
Jordan Creek	2	101	125
Malheur River	5	114	133
Owyhee River	7	104	135
Bully Creek	2	86	140

(a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

# WATER SUPPLY OUTLOOK

## BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS

### OREGON

#### GENERAL OUTLOOK

Streamflow forecasts for this area are near to above average, ranging 87% to 132%. February precipitation was 150% of normal which brought the snowpack up to 93% to 126% on major drainages. Area reservoirs report near normal storage. Soil moisture is near to slightly below normal. Adequate water supply should be available in the coming months.



# STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average <sup>c</sup>
Bear near Wallowa	69	105	Apr.-Sept.		66
Burnt near Hereford	53	125	Mar.-July		42
	49	125	Apr.-Sept.		33
Catherine near Union	65	100	Apr.-Sept.		65
Eagle Creek abv. Skull Creek	198	113	Apr.-July		175
	217	114	Apr.-Sept.		190
Grande Ronde at La Grande	232	120	Mar.-July	211	193
	190	120	Apr.-Sept.	158	158
Hurricane near Joseph	42	90	Apr.-Sept.		47
Imnaha at Imnaha	340	111	Apr.-Sept.		307
Lostine near Lostine	109	87	Apr.-Sept.		125
Powder near Sumpter	70	127	Apr.-July		55
	70	124	Apr.-Sept.		56
Wallowa, East Fork near Joseph	11.4	93	Mar.-Sept.		12.2
	10.5	92	Apr.-Sept.		11.4
Wallowa at Joseph	68	90	May-July		76
Wolf Creek net Inflow	17.5	132	Mar.-June		13.3

## RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average <sup>c</sup>
Phillips Lake	73.5	44.7	18.9	50.1
Thief Valley	17.4	17.4	17.4	17.3
Unity	25.2	13.5	16.3	15.0
Wallowa Lake	37.5	29.8	15.8	22.5
Wolf Creek	10.4	5.9	3.1	--

## SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average <sup>c</sup>
Burnt River	4	109	121
Grande Ronde River above La Grande	4	187	126
Powder River	5	109	112
Wallowa, Imnaha, Catherine Creek	6	85	93

## SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average <sup>c</sup>
Burnt, Powder	2	66	79
Grande Ronde, Catherine Creek, Imnaha River	3	85	92

(a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.



# WATER SUPPLY OUTLOOK

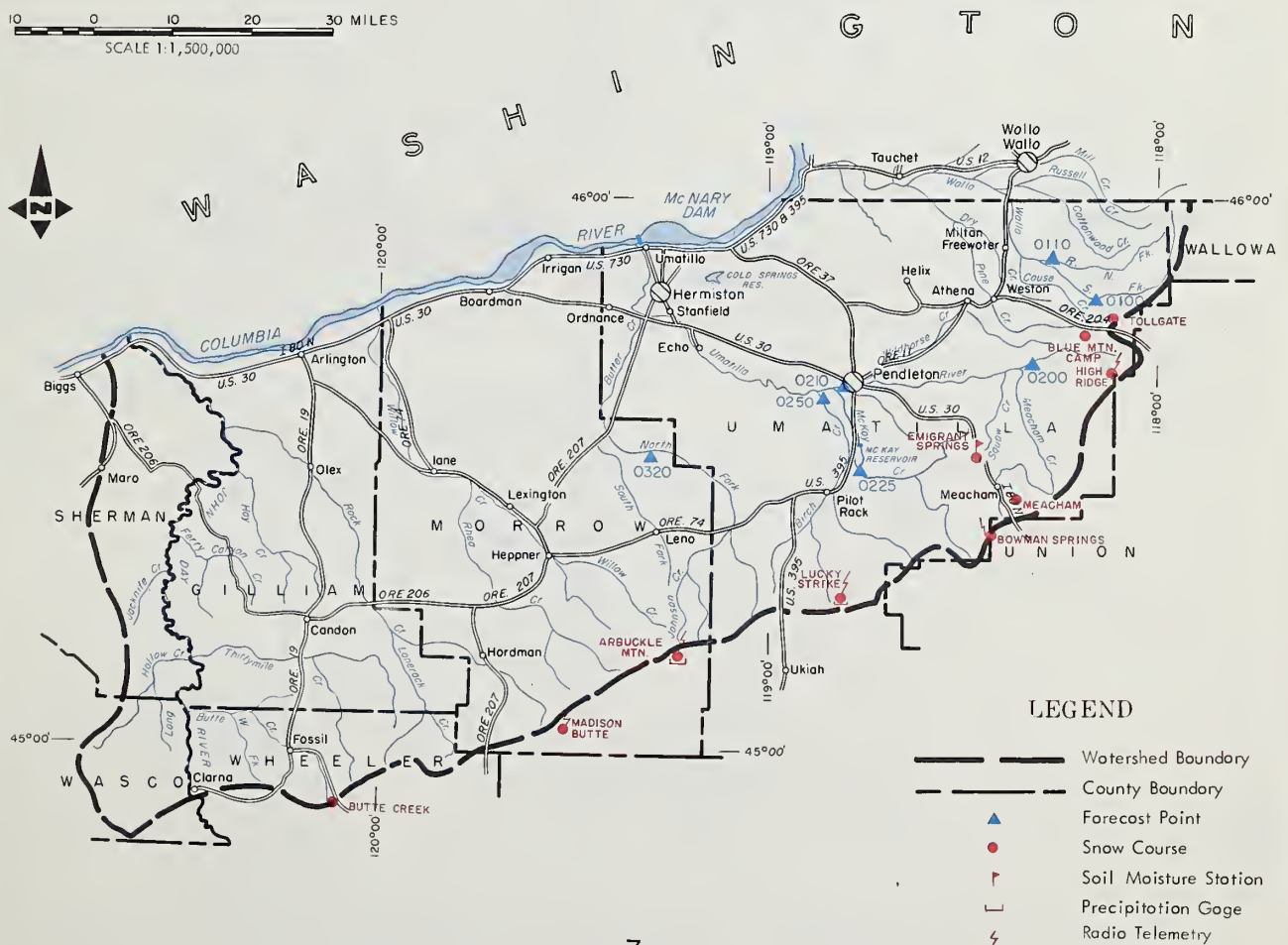
## UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS

### OREGON

#### GENERAL OUTLOOK

Forecasts are generally for much above normal streamflow in this area. Volume forecasts range from 108% to 167% of average. The snowpack is 134% to 156% of average. February precipitation was 120% of average. Cold Springs reservoir reports below average storage while McKay is above average. Soil moisture recharge is near normal on mountain watersheds.

10 0 10 20 30 MILES  
SCALE 1:1,500,000



# STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average C
McKay near Pilot Rock	40	167	Apr.-July		24
	40	167	Apr.-Sept.		24
Umatilla near Gibbon	127	131	Mar.-Sept.		97
	104	138	Apr.-Sept.		75
Umatilla near Pendleton	275	140	Mar.-Sept.		200
	202	140	Apr.-Sept.		144
Walla Walla, South Fork near Milton	85	108	Mar.-Sept.		79
	71	108	Apr.-Sept.		66
Butter Creek nr. Pine City	17	149	Mar.-July		11.4

## FORECAST DATE of LOW FLOW VALUES

FORECAST POINT	Low Flow Value Second/Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
Umatilla at Pendleton	550	June 10	May 22

## RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average C
Cold Springs	50.0	24.9	38.0	40.0
McKay	73.8	47.4	40.2	41.1

## SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average C
Umatilla, Walla Walla, McKay Creek	3	93	87

## SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average C
McKay Creek	3	252	156
Umatilla River	3	211	145
Walla Walla River	2	170	134

(a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

10 0 10 20 30 MILES  
SCALE 1:1,300,000





# STREAMFLOW FORECASTS

STREAMFLOW FORECASTS			THIS YEAR		PAST RECORD	
BASIN, STREAM and/or FORECAST POINT	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET		
	Thousand Acre Feet	Percent of Average		Last Year	Average	
Camas Creek near Ukiah	55	128	Mar.-July		43	
	43	130	Apr.-Sept.		33	
John Day, Middle Fork at Ritter	160	114	Mar.-July		129	
	139	118	Apr.-Sept.		108	
John Day, North Fork at Monument	800	124	Mar.-July		646	
	675	125	Apr.-Sept.		540	
Strawberry near Prairie City	10.4	145	Mar.-July		7.2	
	10.5	138	Apr.-Sept.		7.6	

## SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average c
John Day above Dayville	3	85	71
John Day, North Fork	1	--	94

## SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average c
John Day, North Fork	7	145	130
John Day abv. Dayville	5	114	122

(a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

# WATER SUPPLY OUTLOOK

## UPPER DESCHUTES, CROOKED WATERSHEDS

### OREGON

#### GENERAL OUTLOOK

Water supply conditions vary over this area. The Ochoco-Crooked River forecasts are for 128% to 140% of average streamflow. Snowpack in this drainage is 146% of average. In contrast, the general Deschutes River drainage is forecast to deliver about 80% of average streamflow. Snowpack here is 72% to 80% of normal. February precipitation for the area as a whole was 147% of average. Ochoco and Prineville reservoirs have above average storage, Wickiup is average, and Crane Prairie and Crescent Lake are below average. Mountain soil moisture is below normal.



## STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR		PAST RECORD	
	FORECAST		THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average	PERIOD	Last Year      Average C
Beaver Creek near Paulina	22	138	Apr.-July	16
	22	138	Apr.-Sept.	16
Crane Prairie Reservoir total Inflow	93	78	Apr.-Sept.	119
Crescent at Crescent Lake	17.5	83	Mar.-July	21
	18.1	82	Apr.-Sept.	22
Crooked near Post	173	128	Mar.-July	135
	117	128	Apr.-Sept.	91
Deschutes at Benham Falls	288	80	Apr.-July	360
	462	84	Apr.-Sept.	550
Deschutes below Snow Creek	53	78	Mar.-Sept.	69
	49	78	Apr.-Sept.	62
Deschutes, Little near La Pine	70	80	Mar.-July	88
	62	76	Apr.-Sept.	82
Ochoco Reservoir net Inflow	38	140	Mar.-July	27
	24	125	Apr.-Sept.	18.8
Squaw near Sisters	40	80	Apr.-Sept.	50
Tumalo near Bend	37	85	Apr.-Sept.	44

## FORECAST DATE of LOW FLOW VALUES

FORECAST POINT	Low Flow Value Second/Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
Crane Prairie net Inflow	300	1/	July 15
Crooked R. near Post	100	June 6	June 1
Deschutes at Bend	1500	1/	July 1
Little Deschutes near La Pine	400	May 21	June 7
	200	June 13	July 8
1/ Issued April 1			

## RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average C
Crane Prairie	55.3	39.7	49.0	46.1
Crescent Lake	86.9	43.1	52.9	63.5
Ochoco	47.5	32.5	31.1	28.8
Prineville	153.0	118.5	105.5	101.1
Wickiup	200.0	173.5	170.5	173.2

## SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average C
Crooked R., Upper Deschutes River	1	65	73

## SUMMARY of SNOW MEASUREMENTS (COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average C
Crooked, Ochoco	4	134	146
Deschutes abv. Wickiup	4	104	72
Little Deschutes	4	89	80
Tumalo & Squaw Crs.	3	108	79

(a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.



## WATER SUPPLY OUTLOOK

HOOD, MILE CREEKS, LOWER DESCHUTES  
WATERSHEDS

## OREGON

## GENERAL OUTLOOK

Near normal to slightly below normal water supply is forecast for this area but no serious shortages are anticipated. Forecasts range from 85% to 100% of normal. The snowpack is 90% to 155% of average. Area precipitation for February was 187% of average. Reported reservoir storage is much below average.



# STREAMFLOW FORECASTS

STREAMFLOW FORECASTS		THIS YEAR		PAST RECORD		
BASIN, STREAM and/or FORECAST POINT	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET		
	Thousand Acre Feet	Percent of Average		Last Year	Average C	
Hood River near Hood River	243	85	Apr.-July		286	
	282	85	Apr.-Sept.		332	
	Hood, West Fork near Dee	112	85	Apr.-July		132
		131	85	Apr.-Sept.		154
		White below Tygh Valley	118	100	Apr.-July	
	133		100	Apr.-Sept.		133

## FORECAST DATE of LOW FLOW VALUES

FORECAST POINT	Low Flow Value Second/Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
Clear Branch Inflow	* 38	July 15-31	**39
* Average cfs forecast to flow for this two-week period.			
** Average cfs for period of record			

## RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average <sup>c</sup>
Clear Lake (Wasco)	11.9	0.1	3.7	4.6

## SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average <sup>c</sup>
Hood River	5	137	90
Mile Creeks	1	122	115
White River	3	175	98

(a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 y

Normal streamflow is expected on the Sandy River. The Columbia at The Dalles is forecast at 87% of normal flow.





# SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average <sup>c</sup>
Sandy River	2	168	96

## STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acres Feet	Percent of Average		Last Year	Average <sup>c</sup>
Columbia at The Dalles	61,976	87	Apr.-June		71,237
	89,700	87	Apr.-Sept.		103,493
Sandy River near Marmot	343	100	Apr.-July		343
	398	100	Apr.-Sept.		398

## HISTORICAL DATA (Columbia River at The Dalles)

YEAR	STREAMFLOW <sup>d</sup> (1,000 A.F.)			REGULATED PEAK (1,000 c.f.s.)	DATE
	APR - SEPT.	APR - JUNE	MAY - JUNE		
1958	97,700	72,000	58,600	593	May 31
1959	112,500	71,900	58,900	555	June 23
1960	97,000	64,000	48,000	442	June 6
1961	101,400	74,400	64,000	699	June 8
1962	94,600	64,100	49,200	460	June 5
1963	87,000	56,300	46,200	437	June 18
1964	109,020	70,739	61,313	662	June 18
1965	114,137	80,024	62,477	520	June 9
1966	87,268	58,120	45,922	396	June 12
1967	107,771	72,408	65,112	622	June 10
1968	89,000	55,500	47,900	404	June 13
1969	112,300	85,700	63,800	515	May 15
1970	88,100	62,800	55,200	425	May 28
1971	122,900	88,400	73,700	557	May 13
1972	134,700	96,400	81,400	619	June 20
1958-72 Avg.	104,300	72,900	59,900	529	

## LOWER COLUMBIA RIVER FLOOD STAGES (with 9.5' tide at Astoria)

VANCOUVER GAGE (Weather Bu.)	FLOW AT THE DALLES (1,000 c.f.s.)	DRAINAGE DISTRICT PUMPHOUSE						
		SANDY	SAUVIE ISL.	SCAPPOOSE	DEER ISL.	RAINIER	BEAVER	WOODSON
		RIVER MILES						
		118.9	96.0	91.0	77.0	62.0	52.0	47.0
35 (1894)	1210	41.2	34.2	33.3	28.5	21.9	17.5	15.5
34	1160	40.5	33.5	32.5	27.7	21.2	17.0	15.0
33	1100	39.6	32.4	31.4	26.7	20.2	16.1	14.3
32 (1972)	1050	38.9	31.5	30.5	25.7	19.5	15.4	13.7
31 (1948)	1000	38.0	30.7	29.5	25.1	18.8	14.7	13.0
30	943	36.6	29.5	28.5	24.3	18.1	14.0	12.4
29	897	35.5	28.5	27.7	23.7	17.5	13.4	11.8
28	853	34.3	27.5	26.7	22.8	17.0	13.0	11.4
27 (1956)	811	33.0	26.5	25.6	21.8	16.2	12.5	11.0
26 (1950)	771	32.1	25.5	24.6	20.9	15.5	12.2	10.7
25	733	30.7	24.2	23.2	19.7	14.6	11.7	10.3
24	697	29.7	23.0	22.2	19.0	14.1	11.4	10.2
23	662	29.0	22.3	21.4	18.4	13.6	11.2	10.0
22	628	28.1	21.4	20.3	17.2	13.0	10.9	9.7
21	595	27.2	20.7	19.5	16.4	12.6	10.6	9.6
20 (1954)	564	26.2	19.8	18.6	15.5	12.1	10.2	9.4
19	534	25.5	19.2	18.0	15.0	11.8	10.0	9.3
18	501	24.4	18.3	17.2	14.3	11.4	9.8	9.1
17	479	23.4	17.4	16.4	13.7	11.0	9.6	8.9
16	452	22.4	16.5	15.5	13.0	10.5	9.3	8.7

(a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

The water supply outlook for the Willamette basin has improved since last month. Streamflow is forecast at 83% to 95% of average and no serious shortages are anticipated. The snowpack is now 70% to 99% of average on major drainages, a result of the 149% of normal February precipitation. Reservoir storage is well above average in the Cascades.



## STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average <sup>c</sup>
Clackamas at Estacada	640	95	Apr.-July		674
	750	95	Apr.-Sept.		798
Clackamas above Three Lynx	466	92	Apr.-July		507
	556	92	Apr.-Sept.		604
McKenzie at McKenzie Bridge	377	83	Apr.-July		454
	500	83	Apr.-Sept.		599
McKenzie near Vida	880	85	Apr.-July		1,035
	1,074	85	Apr.-Sept.		1,263
McKenzie, So. Fork near Rainbow	179	85	Apr.-July		210
	203	85	Apr.-Sept.		239
Oak Grove Fork above Power Intake	106	86	Apr.-July		123
	144	90	Apr.-Sept.		162
Row near Dorena	83	85	Apr.-July		98
	87	85	Apr.-Sept.		102
Santiam, North at Mehama	650	85	Apr.-July		765
	741	85	Apr.-Sept.		872
Santiam, South at Waterloo	479	85	Apr.-July		564
	516	85	Apr.-Sept.		607
Willamette, Mid. Fk. blw. N. Fk. nr. Oakridge	583	86	Apr.-July	463	678
	670	86	Apr.-Sept.	578	779
Willamette, No. Fk. of Mid. Fk. near Oakridge	163	86	Apr.-July		189
	180	86	Apr.-Sept.		209
Willamette at Salem	3,737	85	Apr.-July		4,397
	4,202	85	Apr.-Sept.		4,943

## SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average <sup>c</sup>
Clackamas River	2	261	99
McKenzie River	3	216	77
Row River	2	144	85
Santiam River	4	214	80
Willamette, Mid Fk.	5	116	70

## RESERVOIR STORAGE (Thousand Ac. Ft.)

END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average <sup>c</sup>
Blue River	85.6*	36.0	23.0	27.8
Cottage Grove	30.0*	8.8	6.9	8.0
Cougar	155.2*	59.8	41.0	41.2
Detroit	299.9*	135.2	79.1	97.6
Dorena	70.5*	19.8	16.5	18.7
Fall Creek	115.0*	51.0	32.0	35.1
Fern Ridge	94.2*	46.8	32.3	35.5 <sup>b</sup>
Foster	30.0*	3.6	2.7	5.7
Green Peter	270.0*	125.4	70.0	97.1
Hills Creek	200.0*	100.3	65.5	60.0
Lookout Point	337.2*	147.1	85.0	94.0
Timothy Lake	61.7	22.7	53.3	54.8
Henry Hagg Lake	53.0	48.3	46.3	--

\*Multiple purpose  
reservoir--space  
reserved primarily  
for flood runoff.

(a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.



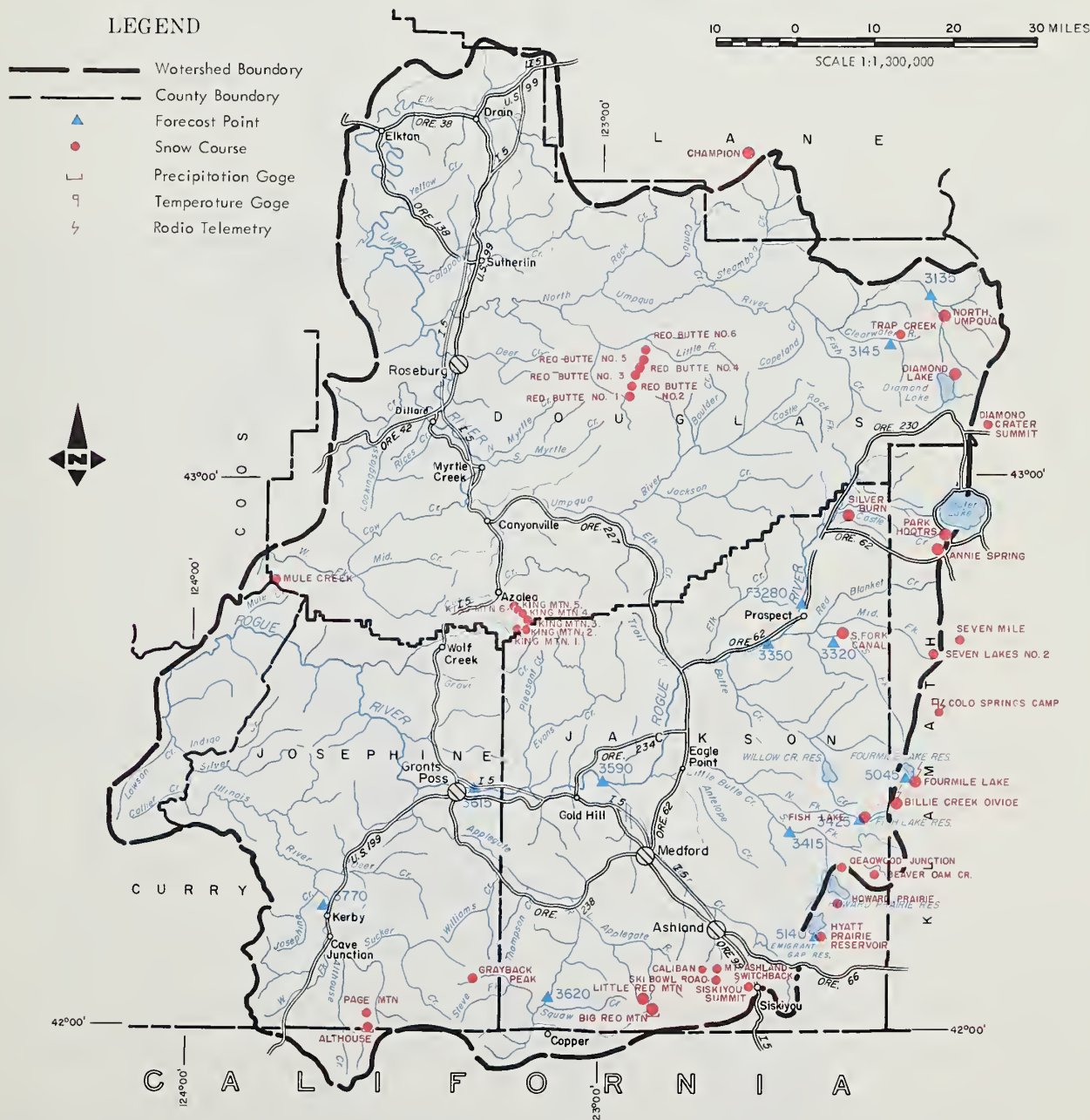
# WATER SUPPLY OUTLOOK

## ROGUE, UMPQUA, WATERSHEDS

### OREGON

#### GENERAL OUTLOOK

Water supply forecasts in this area generally range from 65% to 80% of average in the southern Cascades and 48% to 51% in the Siskiyou area. Water users in this area may experience water shortages if they do not have access to reservoir regulated supplies. The snowpack is only 52% to 68% of normal even though February precipitation was 143% of average. Among the major area reservoirs only Emigrant Lake reported above average storage.





# STREAMFLOW FORECASTS

STREAMFLOW FORECASTS		THIS YEAR		PAST RECORD	
BASIN, STREAM and/or FORECAST POINT	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average <sup>c</sup>
Applegate near Copper	64	48	Apr.-Sept.		133
Clearwater above Trap Creek	62	90	Apr.-Sept.		69
Fourmile Lake net Inflow	3.0	70	Apr.-Sept.		4.3
Hyatt Reservoir net Inflow	3.0	65	Apr.-July		4.6
Illinois River near Kerby	97	51	Apr.-July		191
	100	51	Apr.-Sept.		197
Little Butte, N. Fk. at Fish Lake nr. Lake Cr.	9.5	70	Apr.-Sept.		13.7
Little Butte, S. Fk. near Lake Creek	19.6	70	Apr.-July		28
Rogue above Prospect	205	80	Apr.-July		256
	248	80	Apr.-Sept.		311
Rogue, South Fork near Prospect	43	70	Apr.-July		61
	50	69	Apr.-Sept.		72
Rogue at Raygold near Central Point	559	76	Apr.-July	529	735
	675	76	Apr.-Sept.	691	890
Rogue at Grants Pass	623	70	Apr.-Sept.		890
Umpqua, No. blw. Lemolo Res. nr. Toketee Falls	127	77	Apr.-Sept.		166

## FORECAST DATE of LOW FLOW VALUES

FORECAST POINT	Low Flow Value Second/Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
Little Butte Creek, South Fork	100	May 1	May 27

## RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average C
Emigrant Lake	39.0	31.5	33.3	29.3
Fish Lake	8.0	5.7	4.8	6.0
Fourmile Lake	16.1	7.5	7.1	9.9
Howard Prairie	60.0	35.5	36.9	45.7
Hyatt Prairie	16.1	11.3	10.6	12.4
Lost Creek	315.0	224.2	--	--

## SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average C
Applegate	3	50	53
Bear Creek	2	70	52
Butte Creek	4	90	54
Illinois River	3	87	64
North Umpqua	3	130	68
Rogue River	4	72	57

(a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

[illegible]

## STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average <sup>c</sup>
Clear Lake Reservoir Inflow	59	88	Mar.-July		67
Gerber Reservoir Inflow	27	88	Mar.-July		31
Sprague near Chiloquin	203	75	Mar.-July		271
	180	74	Apr.-Sept.		242
Upper Klamath Lake net Inflow	507	70	Mar.-July	625	724
	370	69	Apr.-Sept.	530	536
Williamson below Sprague River	275	66	Apr.-Sept.	402	414

## SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average <sup>c</sup>
Upper Klamath	1	122	86

## RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average <sup>c</sup>
Clear Lake	440.2	153.0	176.2	250.7
Gerber	94.0	36.1	39.5	55.9
Upper Klamath Lake	584.0	406.2	398.9	409.6

## SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average <sup>c</sup>
Lost River	4	140	102
Sprague River	3	78	86
Upper Klamath	6	68	64
Williamson River	3	53	56

(a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

Water supply forecasts are generally good for this area with some possible exceptions. The Chewaucan River is only forecast at 78% of normal while the rest of the area ranges from 85% to 104% of average. The snowpack has a similar variation, 86% to 120% of average. Area precipitation was 133% of normal. Cottonwood reservoir has above average storage but Drews and Thompson Valley are below average.





## STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average C
Chewaucan near Paisley	67	78	Mar.-July	86	87
Deep above Adel	76	98	Mar.-July		78
Drews Reservoir net Inflow	35	85	Mar.-July		41
Honey Creek near Plush	19.6	98	Mar.-July		20
Silver Creek near Silver Lake	13.0	95	Apr.-July		13.7
Twentymile near Adel	27	104	Mar.-July		26

## SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average C
Chewaucan, Silver Creek, Drew Creek	1	122	87
Honey, Deep, 20-Mi. Cr.	1	87	89

## RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average C
Cottonwood	8.7	3.7	4.1	3.5
Drews	63.0	34.3	25.1	42.9
Thompson Valley	19.5	8.6	7.8	15.3

## SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

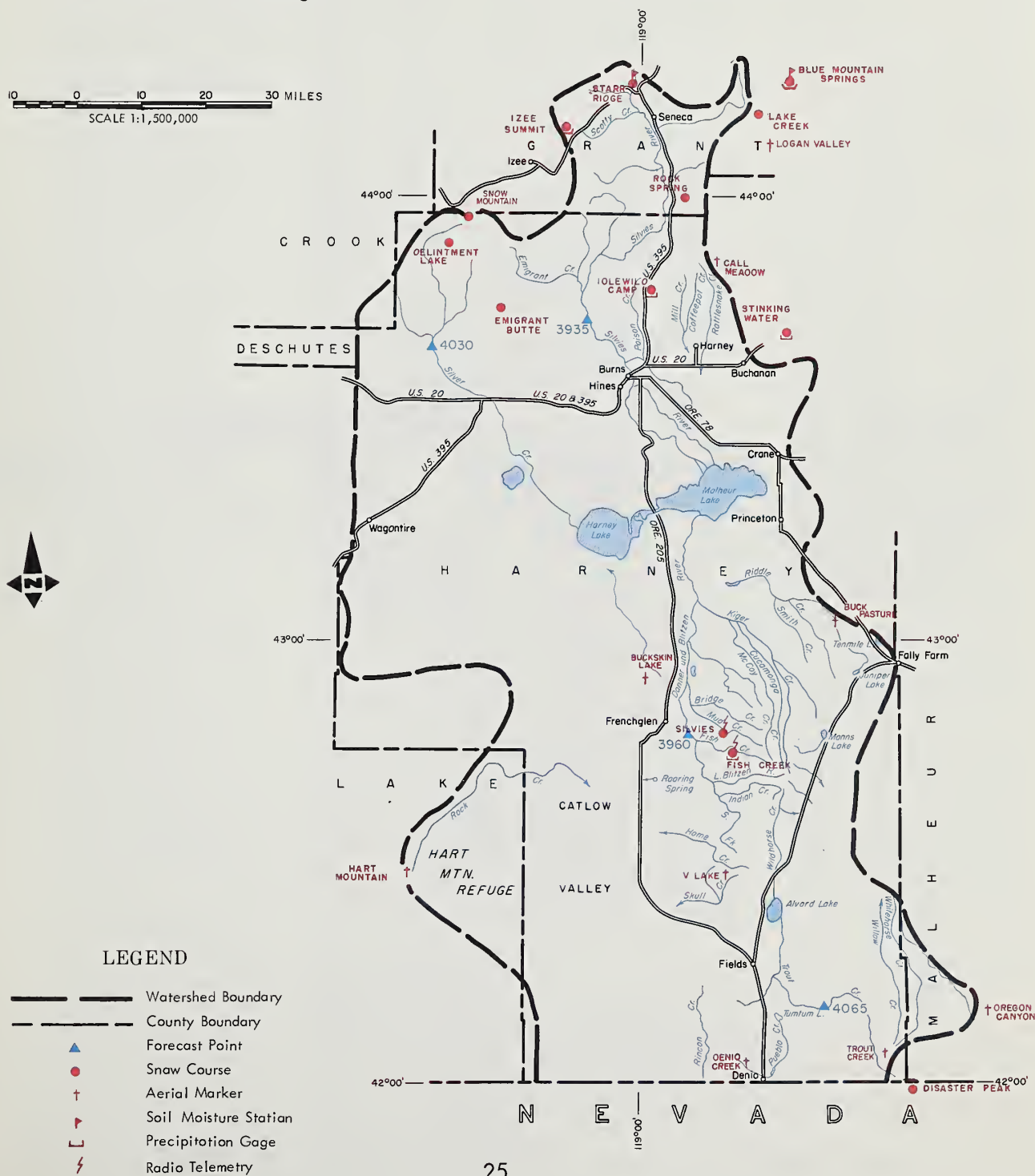
RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average C
Chewaucan River	3	78	86
Deep Creek	3	110	120
Drew Creek	3	131	97
Honey Creek	3	124	114
Silver Creek	3	71	94
Twentymile Creek	2	74	120

(a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

# WATER SUPPLY OUTLOOK HARNEY BASIN WATERSHEDS OREGON

## GENERAL OUTLOOK

Excellent water supplies are expected in Harney County. Water supply forecasts range from 110% to 128% of average. Snowpack water is 111% to 159% of average on major drainages. February precipitation was 142% of average.



## STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average <sup>c</sup>
Donner und Blitzen near Frenchglen	61	110	Mar.-July		55
	58	110	Apr.-Sept.		53
Silver near Riley	20	128	Apr.-July		15.6
Silvies River near Burns	120	128	Mar.-July	128	94
	95	128	Apr.-Sept.	93	74
Trout Creek near Denio	10.5	125	Mar.-July		8.4
	10.0	127	Apr.-Sept.		7.9

## SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average <sup>c</sup>
Silvies River, Silver Cr.	3	81	84
Trout Cr., Donner und Blitzen River	--	--	--

## SUMMARY of SNOW MEASUREMENTS (COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average <sup>c</sup>
Donner und Blitzen R.	4	100	111
Silver Creek	3	112	140
Silvies River	4	134	134
Trout Creek	3	109	159

(a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

# BASIC DATA SUPPLEMENT 1

MARCH 1, 1979

## SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST REC.	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (Inches)	
				Last Yr.	Ave.†
OWYHEE, MALHEUR WATERSHEDS					
Antelope Ridge (Ida.)	3/3	30	8.9	9.2	5.8 <sup>b</sup>
Battle Creek (Ida.) *	3/2	23	6.4	5.0	3.2
Bear Creek (Nev.) *	2/27	59	17.0	20.7	17.9
Big Bend (Nev.)	2/27	38	9.4	9.5	7.5
Blue Mountain Springs	2/22	58	14.8	14.4	14.2
Blue Mtn. Spgs. Plw.(T)	2/28	--	18.6	--	--
Blue Mtn. Spgs. Plw.(S)	2/22	56	17.5	16.0	15.1
Blue Mtn. Spgs. Plw.(M)	2/22	--	17.0	18.2	11.3 <sup>b</sup>
Buck Pasture *	3/2	27	7.6	3.4	2.3
Buckskin, Lower (Nev.)	2/27	33	8.6	8.2	7.1
Buckskin, Upper (Nev.)	2/27	39	12.8	10.2	8.3
Bull Basin (Ida.) *	3/2	5	1.4	2.2	1.2
Bully Creek *	3/2	15	3.9	4.0	2.1
Call Meadows *	3/2	27	7.0	6.9	3.7
Columbia Basin (Nev.)	2/27	43	11.2	13.4	8.1 <sup>b</sup>
Cottonwood-Indian*	3/2	0	0.0	0.7	0.4
Disaster Peak (Nev.)	2/27	45	13.5	15.9	11.6
Eldorado Pass	2/28	23	5.4	6.6	3.1
Fawn Creek (Nev.)	2/27	34	8.8	7.5	5.2 <sup>b</sup>
Fish Creek *	3/2	75	21.0	23.8	20.0
Fish Creek	2/27	78	23.2	27.4	20.5 <sup>b</sup>
Fish Creek Pillow(S)	2/27	79	23.2	--	22.4 <sup>b</sup>
Fish Creek Pillow(M)	--	--	--	--	28.6 <sup>b</sup>
Flag Prairie *	3/2	21	5.5	6.9	4.6
Fox Creek (Nev.)	2/27	40	10.5	10.7	9.6 <sup>b</sup>
Fry Canyon (Nev.)	2/27	31	8.2	7.1	5.9 <sup>b</sup>
Gold Creek (Nev.)	2/27	30	7.7	5.8	4.9
Granite Peak (Nev.)	2/27	46	13.0	19.9	13.1
Hyde Pasture (Ida.) *	3/2	27	7.6	7.0	5.3
Jack Creek, Lower (Nev.)	2/27	26	7.7	4.3	3.6
Jack Creek, Upper (Nev.)	2/27	35	9.9	7.9	6.7
Jack Peak (Nev.)	2/27	65	17.8	20.4	18.5 <sup>b</sup>
Lake Creek R.S.	2/26	47	12.0	9.0 <sup>a</sup>	9.0
Lake Creek R.S. Plw.(T)	2/27	--	11.0	--	--
Lake Creek R.S. Plw.(S)	2/26	49	12.5	11.0	--
Lake Creek R.S. Plw.(M)	2/26	--	9.1	--	--
Laurel Draw (Nev.)	2/27	35	8.6	8.1	7.4 <sup>b</sup>
Logan Valley *	3/2	30	7.8	6.9	7.4
Lookout Butte *	3/2	15	4.2	0.1	0.2
Louse Canyon *	3/2	36	10.1	8.4	3.7
Martin Creek (Nev.) *	2/27	32	6.6	11.8	8.4
Merritt Mountain (Nev.) *	2/27	34	8.5	5.2	6.9 <sup>b</sup>
Midas (Nev.)	2/27	23	5.7	10.4	2.2
Mud Flat (Ida.)	3/3	30	8.6	11.3	5.1 <sup>b</sup>
Oregon Canyon *	3/2	24	6.7	5.0	4.4
Quinn Ridge (Nev.) *	3/2	11	3.1	3.4	1.6
Red Canyon (Ida.) *	3/2	15	4.2	8.4	6.6
Rock Spring	2/27	32	8.3	4.9 <sup>a</sup>	5.0
Rock Spring Plw.(S)	2/27	32	9.0	--	--
Rock Spring Plw.(M)	2/27	--	7.0	--	--
Rodeo Flat (Nev.)	2/27	29	9.1	6.1	4.8
76 Creek (Nev.) *	2/27	44	11.0	13.4	10.7
Silver City (Ida.)	2/24	50	16.6	15.6	13.7
Silver City (Ida.) *	N/R	--	--	15.5	12.6 <sup>b</sup>
Silvies *	3/2	41	11.5	9.0	7.6
Silvies	2/27	48	15.1	13.4	9.8
Silvies Pillow (T)	2/27	--	20.7	--	--
Silvies Pillow (S)	--	--	--	--	--
Silvies Pillow (M)	2/27	--	23.8	18.3	19.3 <sup>b</sup>
South Mountain #2 (Ida.)	2/24	54	15.0	15.8	11.6
South Mtn. #2 Pillow (T)	2/28	--	13.2	--	--
Stag Mountain (Nev.) *	2/27	33	8.3	6.4	5.4 <sup>b</sup>
Stinking Water	2/26	13	3.9 <sup>a</sup>	3.7	2.4
Succor Creek (Ida.) *	3/2	35	9.8	8.1	5.6
Taylor Canyon (Nev.)	2/27	28	8.3	6.7	4.5
Toe Jam (Nev.) *	N/R	--	--	9.7	8.6 <sup>b</sup>
Tremewan Ranch (Nev.) *	N/R	--	--	3.8	1.5
Trout Creek *	3/2	36	10.1	11.5	6.7
"V" Lake *	3/2	30	8.4	9.6	6.1
Vaught Ranch (Ida.) *	3/2	27	7.6	7.0	4.1 <sup>b</sup>
War Eagle (Ida.) *	3/2	86	23.2	23.2	19.6 <sup>b</sup>

## SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST REC.	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (Inches)	
				Last Yr.	Ave.†
BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS					
Aneroid Lake #1		<sup>e</sup>		30.8	31.1
Aneroid Lake #2	2/27	75	20.0	27.6	27.6
Anthony Lake	2/27	75	24.1	20.4	22.7
Bald Mountain (OR) *	3/2	81	21.9	4.6	19.4
Beaver Reservoir (Rev.)	2/26	38	8.2	8.4	10.8
Beaver Res. Pillow (S)	2/26	36	7.3	--	--
Beaver Res. Pillow (M)	---	---	---	---	---
Big Sheep *	3/2	81	22.7	25.5	23.1
Blue Mtn. Summit	2/28	41	10.0	10.0	7.9
Bourne	3/5	64	17.8	14.4	13.8
Bourne Pillow (T)	2/28	--	20.5	--	--
Bourne Pillow (S)	3/5	71	19.3	17.0	16.8 <sup>b</sup>
Bourne Pillow (M)	3/5	--	20.9	19.6	22.5 <sup>b</sup>
County Line	3/1	33	8.2	3.2	4.7
County Line Pillow (S)	3/1	31	8.0	--	--
County Line Pillow (M)	3/1	--	7.8	--	--
Dooley Mountain	2/26	34	8.1	9.6	7.9
Eilertson Meadows	3/1	48	12.2	10.5	10.2
Eilertson Meadows Plw.(S)	3/1	46	12.2	--	--
Eilertson Meadows Plw.(M)	---	---	---	---	---
Eldorado Pass	2/28	23	5.4	6.6	3.1
Gold Center	3/1	56	15.0	11.2	11.5
Gold Center Pillow(S)	3/1	54	13.3	--	--
Gold Center Pillow(M)	3/1	--	11.9	--	--
Goodrich Lake	3/5	105	32.2	31.2	31.0 <sup>b</sup>
Little Alps	2/27	50	12.4	9.2	12.0
Little Antone	2/27	41	10.0	6.6	6.7 <sup>b</sup>
Little Antone (Alt.)	2/27	43	11.7	6.4	8.2 <sup>b</sup>
Lucky Strike	3/2	48	14.3	9.7	10.9
Lucky Strike Pillow (T)	2/28	--	13.7	--	--
Lucky Strike Pillow (S)	3/2	45	13.0	6.1	5.0 <sup>b</sup>
Lucky Strike Pillow (M)	3/2	--	17.3	5.3	9.7 <sup>b</sup>
Meacham	3/1	45	13.2	4.7	9.2
Mirror Lake *	3/2	169	43.9	59.9	58.3 <sup>b</sup>
Moss Spring	2/28	78	20.6	21.2	20.2
Moss Spring Pillow (S)	---	---	---	---	---
Moss Spring Pillow (M)	---	---	---	---	---
Mt. Howard	3/2	66	19.8	--	--
Schneider Meadow	3/2	97	29.6	30.6	26.7
Schneider Meadow Plw.(S)	---	---	---	---	---
Schneider Meadow Plw.(M)	3/2	--	24.2	27.0	--
Schoolmarm	<sup>e</sup>	--	--	2.6 <sup>a</sup>	3.3
Standley *	3/2	83	21.6	31.2	25.5
Taylor Green	3/2	63	17.8	15.0	14.6
Taylor Green Pillow (T)	2/28	--	21.8	--	--
Taylor Green Pillow (S)	3/2	74	21.3	19.0	--
Taylor Green Pillow (M)	3/2	--	19.8	--	--
Tipton	2/28	45	11.0	10.2	9.6
Tipton Snow Pillow (S)	---	---	---	13.3	12.6 <sup>b</sup>
Tipton Snow Pillow (M)	---	---	---	15.6	8.9 <sup>b</sup>
Tollgate	2/28	85	27.7	18.9	22.1
TV Ridge	3/2	55	14.9	18.5	15.4 <sup>b</sup>
West Eagle Meadows *	3/2	106	29.7	28.6	17.8 <sup>b</sup>
Wolf Creek Pillow (T)	3/1	--	11.8	--	--
Wolf Creek Pillow (S)	---	---	---	16.0	16.6 <sup>b</sup>
Wolf Creek Pillow (M)	---	---	---	---	---

\* Aerial

N/R No Report

T = Telemetry Measurement

S = Snow Tube Measurement

M = Manometer Measurement

(a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.



# BASIC DATA SUPPLEMENT 1

MARCH 1, 1979

## SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST REC.	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (Inches)	
				Last Yr.	Ave.†

## SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST REC.	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (Inches)	
				Last Yr.	Ave.†

### UMATILLA, WALLA, WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS

Arbuckle Mountain	3/2	51	16.5	8.1	9.0
Arbuckle Mtn. Plw.(T)	2/28	--	19.0	--	--
Arbuckle Mtn. Plw.(S)	3/2	67	18.3	16.2	10.9
Arbuckle Mtn. Plw.(M)	3/2	--	19.3	17.4	20.0
Blue Mountain Camp	2/28	57	20.0	8.9	13.6
Bowman Springs Plw.(T)	2/28	--	14.7	--	--
Bowman Springs Plw.(S)	3/2	44	12.0	7.0	5.0
Bowman Springs Plw.(M)	3/2	--	15.7	8.7	6.2
Butte Creek Summit	N/R	--	--	--	1.0
Emigrant Springs	3/1	34	11.6	0.0	5.0
Emigrant Springs Plw.(S)	3/1	33	10.3	--	--
Emigrant Springs Plw.(M)	---	--	--	--	--
High Ridge Pillow (T)	2/27	--	23.1	--	--
High Ridge Pillow (S)	2/27	93	29.5	24.2	26.5
High Ridge Pillow (M)	2/27	--	23.2	13.9	14.5
Lucky Strike	3/2	48	14.3	9.7	10.9
Lucky Strike Pillow (T)	2/28	--	13.7	--	--
Lucky Strike Pillow (S)	3/2	45	13.0	6.1	5.0
Lucky Strike Pillow (M)	3/2	--	17.3	5.3	9.7
Madison Butte Pillow(S)	3/2	36	9.7	2.7	--
Madison Butte Pillow(M)	3/2	--	11.5	7.4	--
Meacham	3/1	45	13.2	4.7	9.2
Tollgate	2/28	85	27.7	18.9	22.1

### UPPER JOHN DAY WATERSHEDS

Anthony Lake	2/27	75	24.1	20.4	22.7
Arbuckle Mountain	3/2	51	16.5	8.1	9.0
Arbuckle Mountain Plw.(T)	2/28	--	19.0	--	--
Arbuckle Mountain Plw.(S)	3/2	67	18.3	16.2	10.9
Arbuckle Mountain Plw.(M)	3/2	--	19.3	17.4	20.0
Blue Mountain Springs	2/22	58	14.8	14.4	14.2
Blue Mtn. Spgs. Plw.(T)	2/28	--	18.6	--	--
Blue Mtn. Spgs. Plw.(S)	2/22	56	17.5	16.0	15.1
Blue Mtn. Spgs. Plw.(M)	2/22	--	17.0	18.2	11.3
Blue Mountain Summit	2/28	41	10.0	10.0	7.9
Butte Creek Summit	N/R	--	--	--	1.0
Derr	2/27	44	11.8	8.3	8.3
Derr Pillow (S)	---	--	--	--	--
Derr Pillow (M)	2/27	--	10.7	--	--
Gold Center	3/1	56	15.0	11.2	11.5
Gold Center Plw.(S)	3/1	54	13.3	--	--
Gold Center Plw.(M)	3/1	--	11.9	--	--
Indian Creek Butte *	Discontinued	--	--	31.4	21.0
Izee Summit	2/27	43	10.7	6.9	6.8
Lucky Strike	3/2	48	14.3	9.7	10.9
Lucky Strike Plw.(T)	2/28	--	13.7	--	--
Lucky Strike Plw.(S)	3/2	45	13.0	6.1	5.0
Lucky Strike Plw.(M)	3/2	--	17.3	5.3	9.7
Marks Creek	2/28	23	6.7	0.1	2.9
Ochoco Meadows	2/28	44	11.4	10.4	8.1
Ochoco Mdw. Plw.(S)	2/28	51	13.8	12.8	--
Ochoco Mdw. Plw.(M)	2/28	--	7.8	--	--
Olive Lake *	3/6	61	17.1	19.6	17.3
Schoolmarm	e	--	--	2.6	3.3
Snow Mountain	2/26	54	14.8	14.6	11.3
Snow Mountain Plw.(T)	3/1	--	11.3	10.4	5.8
Snow Mountain Plw.(S)	2/26	44	11.3	14.6	11.3
Snow Mountain Plw.(M)	---	--	--	--	--
Starr Ridge	2/27	32	8.0	5.0	5.2
Starr Ridge Plw.(S)	2/27	35	9.5	--	--
Starr Ridge Plw.(M)	2/27	--	5.5	--	--
Tipton	2/28	45	11.0	10.2	9.6
Tipton Pillow (S)	2/28	51	11.8	13.3	12.6
Tipton Pillow (M)	---	--	--	15.6	8.9

### UPPER DESCHUTES, CROOKED WATERSHEDS

Bald Peter	3/1	80	24.0	28.6	21.2
Caldwell Ranch	e	--	--	--	8.8
Cascade Summit	2/28	60	17.4	16.2	24.9
Cascade Summit Plw.(S)	2/28	73	20.5	--	--
Cascade Summit Plw.(M)	---	--	--	--	--
Chemult Alternate	2/28	26	5.3	10.5	8.5
Chemult Alt. Plw.(S)	---	--	--	--	--
Chemult Alt. Plw.(M)	---	--	--	--	--
Derr	2/27	44	11.8	8.3	8.3
Derr Pillow (S)	---	--	--	--	--
Derr Pillow (M)	2/27	--	10.7	--	--
Hogg Pass	2/28	98	27.5	19.8	34.6
Hogg Pass Pillow(T)	2/28	--	24.0	--	--
Hogg Pass Pillow(S)	2/28	104	29.3	22.7	--
Hogg Pass Pillow(M)	2/28	--	24.0	23.4	--
Hungry Flat	3/1	16	4.1	--	4.9
Irish-Taylor Pillow(T)	---	--	--	--	51.3
Irish-Taylor Pillow(S)	2/27	71	20.3	20.8	34.5
Irish-Taylor Pillow(M)	2/27	--	14.9	13.6	--
Lionshead *	3/1	45	13.5	15.5	5.8
Marks Creek	2/28	23	6.7	0.1	2.9
New Crescent Lake	2/28	42	10.2	7.3	12.1
New Crescent Lake Plw.(S)	2/28	50	11.5	--	--
New Crescent Lake Plw.(M)	---	--	--	--	--
New Dutchman Flat #2	3/1	108	34.7	33.3	43.8
Ochoco Meadows	2/28	44	11.4	10.4	8.1
Ochoco Meadows Plw.(S)	2/28	51	13.8	12.8	--
Ochoco Meadows Plw.(M)	2/28	--	7.8	--	--
Racing Creek	3/1	48	13.6	11.0	12.3
Snow Mountain	2/26	54	14.8	14.6	11.3
Snow Mountain Plw.(T)	3/1	--	11.3	10.4	5.8
Snow Mountain Plw.(S)	2/26	44	11.3	14.6	11.3
Snow Mountain Plw.(M)	---	--	--	--	--
Summit Lake Pillow(T)	---	--	--	--	21.8
Summit Lake Pillow(S)	2/28	89	22.8	24.1	28.5
Summit Lake Pillow(M)	2/28	--	17.5	20.9	12.9
Tamarack	2/28	30	5.9	3.1	4.6
Tangent	3/1	61	17.7	15.8	20.6
Three Creek Butte	2/26	22	7.1	6.6	9.4
Three Creek Meadow	2/26	38	10.4	8.8	15.2
Three Creek Mdw. Plw.(T)	---	--	--	--	--
Three Creek Mdw. Plw.(S)	2/26	51	14.3	13.0	17.1
Three Creek Mdw. Plw.(M)	2/26	--	10.4	--	--
Waldo Lake	e	--	--	17.3	27.3
Whitewater Meadow *	3/1	7	2.0	3.5	4.6

### HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS

Brooks Meadow	2/27	39	11.7	9.6	10.2
Clear Lake	2/26	29	10.8	4.6	9.2
Clear Lake Pillow(S)	2/26	49	15.9	--	--
Clear Lake Pillow(M)	---	--	--	--	--
Clear Lake Expt.	2/26	49	15.9	10.0	14.2
Greenpoint	2/28	38	10.7	14.0	15.0
Greenpoint Pillow (T)	2/28	--	15.9	--	--
Greenpoint Pillow (S)	2/28	30	7.7	12.3	--
Greenpoint Pillow (M)	2/28	--	12.2	14.1	--
Mt. Hood Test Site(T)	3/1	--	32.0	--	50.6
Mt. Hood Test Site(S)	3/1	144	49.0	44.4	45.9
Mt. Hood Test Site(M)	3/1	--	35.7	36.8	--
Mud Ridge Pillow (T)	2/27	--	19.4	--	--
Mud Ridge Pillow (S)	2/28	70	18.8	14.2	27.5
Mud Ridge Pillow (M)	2/28	--	21.0	8.6	23.4
Red Hill	2/26	77	26.5	25.8	33.4
Red Hill Pillow (T)	2/27	--	38.6	--	--
Red Hill Pillow (S)	2/26	79	25.3	--	--
Red Hill Pillow (M)	---	--	--	25.8	23.0
Still Creek	2/28	63	19.5	8.4	20.8
Switchback	2/27	24	8.1	10.0	12.8
Tilly Jane	2/28	86	26.5	32.1	36.4
Umbrella Falls	2/28	143	40.5	45.0	54.4

(a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

# BASIC DATA SUPPLEMENT 1

MARCH 1, 1979

## SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST REC.	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches) Last Yr.	Ave.†
LOWER COLUMBIA WATERSHED					
Blazed Alder Pillow(T)	N/R				
Blazed Alder Pillow(S)	---			8.7	--
Blazed Alder Pillow(M)	---			10.8	--
Mt. Hood Test Site (T)	3/1	--	32.0	--	50.6 <sup>b</sup>
Mt. Hood Test Site (S)	3/1	144	49.0	44.4	45.9 <sup>b</sup>
Mt. Hood Test Site (M)	3/1	--	35.7	36.8	--
Mud Ridge Pillow (T)	2/27	--	19.4	--	--
Mud Ridge Pillow (S)	2/28	70	18.8	14.2	27.5 <sup>b</sup>
Mud Ridge Pillow (M)	2/28	--	21.0	8.6	23.4 <sup>b</sup>
No. Fork Res. (T)	2/28	--	14.3	3.3	6.6 <sup>b</sup>
No. Fork Res. (S)	---			3.7	33.4 <sup>b</sup>
No. Fork Res. (M)	---				
Still Creek	2/28	63	19.5	8.4	20.8
WILLAMETTE WATERSHEDS					
Cascade Summit	2/28	60	17.4	16.2	24.9
Cascade Summit Pillow(S)	2/28	73	20.5	--	--
Cascade Summit Pillow(M)	---				
Champion	2/26	65	18.1	16.4	23.3
Clackamas Lake	3/1	27	7.6	3.0	11.3
Clackamas Lake Plw.(S)	---				
Clackamas Lake Plw.(M)	---				
Clear Lake	2/26	29	10.8	4.6	9.2
Clear Lake Pillow(S)	2/26	49	15.9	--	--
Clear Lake Pillow(M)	---				
Clear Lake Expt.	2/26	49	15.9	10.0	14.2
Dead Horse Grade	3/2	44	13.0	0.0	14.4
Detroit (Town)	2/28	TR	0.1	0.0	1.0
Detroit Dam	2/28	TR	0.1	0.0	0.5
Golden Curry Creek	2/26	13	3.5	--	4.8 <sup>b</sup>
Hogg Pass	2/28	98	27.5	19.8	34.6
Hogg Pass Pillow(T)	2/28	--	20.4	--	--
Hogg Pass Pillow(S)	2/28	104	29.3	22.7	--
Hogg Pass Pillow(M)	2/28	--	24.0	23.4	--
Jump Off Joe Pillow(T)	2/28	--	10.0	--	--
Jump Off Joe Pillow(S)	---			0.0	--
Jump Off Joe Pillow(M)	---			0.0	--
Laurel Mountain	Discontinued			0.0	7.6 <sup>b</sup>
Laying Creek	2/26	0	0.0	0.0	--
Lookout Point Dam	2/28	0	0.0	--	--
Lost Creek Ranch	3/2	2	1.1	0.0	3.8
Lund Park	2/26	0	0.0	0.0	0.6
Marion Forks	2/28	31	8.6	0.0	12.0
Marion Forks Pillow (S)	2/28	32	8.5	--	--
Marion Forks Pillow (M)	2/28	--	8.4	--	--
Marys Peak	N/R			0.0	9.2 <sup>b</sup>
McCredie Springs	2/28	0	0.0	0.0	0.4
McKenzie	3/6	80	31.6	21.2	38.4
McKenzie Pillow (S)	3/6	70	26.3	--	--
McKenzie Pillow (M)	---			--	--
McKenzie Bridge	3/2	0	0.0	0.0	0.6
Mill City	Discontinued				
Mt. Hood Test Site (T)	3/1	--	32.0	--	50.6 <sup>b</sup>
Mt. Hood Test Site (S)	3/1	144	49.0	44.4	45.9 <sup>b</sup>
Mt. Hood Test Site (M)	3/1	--	35.7	36.8	--
Oakridge	2/28	0	0.0	0.0	--
Peavine Ridge Pillow(T)	N/R			4.6	14.9
Railroad Overpass	2/28	0	0.0	0.0	2.0
Railroad Overpass Plw.(S)	2/28	0	0.0	--	--
Railroad Overpass Plw.(M)	2/28	--	0.0	--	--
Saddle Mtn. Pillow(T)	N/R			0.2	9.1 <sup>b</sup>
Saddle Mtn. Pillow(S)	---			--	11.1 <sup>b</sup>
Saddle Mtn. Pillow(M)	---				
Salt Creek Falls	2/28	28	8.7	0.8	13.4
Salt Creek Falls Plw.(S)	2/28	44	13.3	--	--
Salt Creek Falls Plw.(M)	---				

## SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST REC.	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches) Last Yr.	Ave.†
WILLAMETTE WATERSHEDS (CONT.)					
Santiam Junction	2/27	59	17.1	7.1	21.4
Santiam Junction Plw.(T)	2/27	--	9.8	--	--
Santiam Junction Plw.(S)	2/27	61	18.2	8.0	--
Santiam Junction Plw.(M)	2/27	--	8.3	8.8	--
Seine Creek Pillow (T)	N/R			0.0	1.4 <sup>b</sup>
Still Creek	2/28	63	19.5	8.4	20.8
Summit Lake Pillow(T)	N/R			--	21.8 <sup>b</sup>
Summit Lake Pillow(S)	2/28	89	22.8	24.1	28.5 <sup>b</sup>
Summit Lake Pillow(M)	2/28	--	17.5	20.9	12.9 <sup>b</sup>
Timothy Lake	2/23	41	10.7	4.5	12.4 <sup>b</sup>
Valsetz Summit	Discontinued			0.0	1.6 <sup>b</sup>
Vida	3/2	0	0.0	0.0	0.1
Waldo Lake	e			17.3 <sup>b</sup>	27.3 <sup>b</sup>
Weaver Creek	2/26	0	0.0	0.0	0.7 <sup>b</sup>
White Branch Slide	3/2	22	5.4	0.0	7.0
Whitewater Bridge	2/28	15	4.7	0.0	4.8
ROGUE, UMPQUA WATERSHEDS					
Althouse	2/27	26	6.2	1.6	7.5
Annie Spring	3/1	96	25.4	36.6	37.2
Beaver Dam Creek	2/28	24	6.6	7.9	12.5
Big Red Mountain	2/22	61	14.0	25.9	24.6
Big Red Mountain Plw.(S)	---			--	--
Big Red Mountain Plw.(M)	2/22	--	12.7	--	--
Billie Creek Divide	2/26	33	9.0	14.5	18.6
Billie Cr. Div. Pillow(T)	2/27	--	10.7	--	--
Billie Cr. Div. Pillow(S)	2/26	35	9.3	17.7	11.5 <sup>b</sup>
Billie Cr. Div. Pillow(M)	2/26	--	10.2	15.7	16.6 <sup>b</sup>
Caliban	2/22	55	12.8	32.7	30.8 <sup>b</sup>
Caliban (Alternate)	2/22	62	14.6	28.6	23.7 <sup>b</sup>
Champion	2/26	65	18.1	16.4	23.3
Cold Springs Camp	3/2	67	18.6	27.3	29.4
Cold Spgs. Camp Pillow(T)	---			--	23.7 <sup>b</sup>
Cold Spgs. Camp Pillow(S)	3/2	61	18.5	18.0	15.8 <sup>b</sup>
Cold Spgs. Camp Pillow(M)	3/2	--	12.5	19.4	--
Deadwood Junction	2/28	18	4.9	--	8.6
Diamond-Crater Summit	2/23	53	13.8	--	26.9
Diamond Lake	2/23	39	9.7	--	17.9
Diamond Lake Pillow(S)	2/23	45	12.0	--	--
Diamond Lake Pillow(M)	---				
Fish Lake	2/28	31	7.4	8.0	11.8 <sup>b</sup>
Fish Lake Pillow(S)	2/28	31	7.7	--	--
Fish Lake Pillow(M)	---				
Fourmile Lake	2/28	39	11.0	20.2	20.4 <sup>b</sup>
Fourmile Lake Pillow(T)	2/28	--	15.6	--	--
Fourmile Lake Pillow(S)	2/28	49	10.3	24.7	--
Fourmile Lake Pillow(M)	2/28	--	13.6	27.4	--
Grayback Peak	2/23	47	9.0	21.5	20.5
Howard Prairie Reservoir	2/28	20	5.6	7.0	8.3
Hyatt Prairie	2/28	18	4.3	--	7.3
Hyatt Prairie Pillow(S)	---				
Hyatt Prairie Pillow(M)	2/28	--	6.5	--	--
King Mountain #1	2/26	29	7.3	4.2	7.6 <sup>b</sup>
King Mountain #2	2/26	23	5.7	0.0	5.0 <sup>b</sup>
King Mountain #3	2/26	8	2.4	0.0	1.4 <sup>b</sup>
King Mountain #4	2/26	0	0.0	0.0	--
King Mountain #5	2/26	0	0.0	0.0	--
King Mountain #6	2/26	0	0.0	0.0	--
Little Red Mountain	e			--	20.1
Mt. Ashland Switchback	2/23	66	15.5	27.0	29.9 <sup>b</sup>
Mule Creek	2/26	31	8.8	0.0	8.1 <sup>b</sup>
North Umpqua	3/1	34	9.9	5.4	13.3
Page Mountain	2/27	17	5.0	0.0	3.6
Park Headquarters	3/1	119	32.7	48.4	50.7

(a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.



# BASIC DATA SUPPLEMENT 1

MARCH 1, 1979

## SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST REC.	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches)	
				Last Yr.	Ave. C
ROGUE, UMPQUA WATERSHEDS (CTD)					
Red Butte #1	2/25	31	6.7	3.2	11.9
Red Butte #2	2/25	27	5.3	0.0	7.8
Red Butte #3	2/25	16	3.8	0.0	4.6
Red Butte #4	2/25	6	1.6	0.0	1.7
Red Butte #5	2/25	0	0.0	0.0	0.4
Red Butte #6	2/25	0	0.0	0.0	0.2
Seven Mile	3/1	66	17.0	26.7	28.0
Seven Mile Pillow(S)	3/1	68	8.0	27.0	--
Seven Mile Pillow(M)	3/1	--	10.8	20.7	14.6
Silver Burn	3/1	27	7.0	4.7	12.0
Siskiyou Summit	2/28	17	3.3	0.0	6.6
Ski Bowl Road	2/23	57	12.4	29.8	25.4
South Fork Canal	3/1	4	0.9	0.0	2.0
Trap Creek	3/1	32	9.5	2.2	11.6
KLAMATH WATERSHEDS					
Annie Spring	3/1	96	25.4	36.6	37.2
Billie Creek Divide	2/26	33	9.0	14.5	18.6
Billie Cr. Div. Plw.(T)	2/27	--	10.7	--	--
Billie Cr. Div. Plw.(S)	2/26	35	9.3	17.7	11.5
Billie Cr. Div. Plw.(M)	2/26	--	10.2	15.7	16.6
Chemult Alternate	2/28	26	5.3	10.5	8.5
Chemult Alternate Plw.(S)	---	---	---	---	---
Chemult Alternate Plw.(M)	---	---	---	---	---
Chiloquin (PP&L)	N/R	---	---	0.0	1.0
Cold Springs Camp	3/2	67	18.6	27.3	29.4
Cold Spgs. Camp Plw.(T)	---	---	---	--	23.7
Cold Spgs. Camp Plw.(S)	3/2	61	18.5	18.0	15.8
Cold Spgs. Camp Plw.(M)	3/2	--	12.5	19.4	--
Crazyman Flat *	2/26	36	9.4	8.9	8.0
Crowder Flat (Calif.) *	2/26	10	2.7	0.0	2.2
Crystal (PP&L)	N/R	---	---	0.0	8.4
Diamond-Crater Summit	2/23	53	13.8	--	26.9
Dog Hollow *	2/26	6	1.6	0.0	0.8
Finley Corrals *	2/26	52	13.0	14.4	14.0
Fort Klamath (PP&L)	N/R	---	---	0.1	3.5
Fourmile Lake	2/28	39	11.0	20.2	20.4
Fourmile Lake Pillow(T)	2/28	--	15.6	--	--
Fourmile Lake Pillow(S)	2/28	49	10.3	24.7	--
Fourmile Lake Pillow(M)	2/28	--	13.6	27.4	--
Gerber	3/1	10	2.3	--	2.3
Harriman (PP&L)	N/R	---	---	0.0	4.3
Howard Prairie	2/28	20	5.6	7.0	8.3
Hyatt Prairie Reservoir	2/28	18	4.3	--	7.3
Hyatt Prairie Res.Plw.(S)	---	---	---	---	---
Hyatt Prairie Res.Plw.(M)	2/28	--	6.5	--	--
Kirk (PP&L)	N/R	---	---	0.1	5.5
Park Headquarters	3/1	119	32.7	48.4	50.7
Quartz Mountain	2/27	15	4.0	4.6	5.3
Quartz Mtn. Ext.	2/27	17	4.5	--	--
Quartz Mtn. Pillow(S)	2/27	23	6.0	--	--
Quartz Mtn. Pillow(M)	2/27	--	5.9	--	--
Seven Mile	3/1	66	17.0	26.7	28.0
Seven Mile Pillow(S)	3/1	68	8.0	27.0	--
Seven Mile Pillow(M)	3/1	--	10.8	20.7	14.6
State Line (Calif.) *	2/26	26	6.5	4.0	7.1
Strawberry	2/24	29	7.3	5.0	5.9
Strawberry Pillow(S)	2/24	27	6.8	--	--
Strawberry Pillow(M)	---	---	---	---	---
Summer Rim *	2/26	41	10.2	14.4	12.0
Summer Rim	2/27	51	13.8	13.8	14.0
Summer Rim Pillow (T)	2/27	--	8.9	--	--
Summer Rim Pillow (S)	2/27	42	10.0	--	16.1
Summer Rim Pillow (M)	2/27	--	10.6	--	8.3
Sycan Flat *	2/26	21	6.1	5.0	5.6
Taylor Butte	2/28	11	2.3	7.3	4.2
Taylor Butte Pillow(S)	2/28	12	2.3	--	--
Taylor Butte Pillow(M)	---	---	---	--	4.0

## SNOW

SNOW		THIS YEAR		PAST REC.	
DRAINAGE BASIN and/or SNOW COURSE	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches)	
				Last Yr.	Ave. C.
LAKE COUNTY, GOOSE LAKE WATERSHEDS					
Adin Mountain (Calif.)	2/27	39	8.9	9.2	10.5
Bald Mountain (Nev.)	2/26	21	5.3	4.6	2.7
Bear Flat Meadow *	2/26	32	8.0	11.9	8.0
Camas Creek #1	2/28	36	10.0	7.4	8.4
Camas Creek #2	2/28	44	10.9	8.9	--
Cedar Pass (Calif.)	2/20	44	11.6	12.1	12.9
Colvin Creek *	2/26	21	5.5	4.9	4.1
Cox Flat *	2/26	21	5.3	6.9	6.8
Crowder Flat (Calif.) *	2/26	10	2.7	0.0	2.2
Dismal Swamp (Calif.) *	2/26	58	14.5	22.2	13.8
Finley Corrals *	2/26	52	13.0	14.4	14.0
Hart Mountain *	2/26	18	4.7	4.3	1.4
Little Bally Mtn. (Nev.) *	2/26	20	5.2	6.3	2.6
Mt. Bidwell (Calif.)	2/22	62	18.6	23.3	13.0 <sup>b</sup>
North Star (Calif.)	2/22	49	13.6	16.0	11.2
Patton Meadows *	2/26	46	11.5	16.1	14.5
Quartz Mountain	2/27	15	4.0	4.6	5.3
Quartz Mountain Ext.	2/27	17	4.5	--	--
Quartz Mountain Plw.(S)	2/27	23	6.0	--	--
Quartz Mountain Plw.(M)	2/27	--	5.9	--	--
Rogger Meadows *	2/26	51	13.3	12.2	7.8 <sup>b</sup>
Sherman Valley *	2/26	40	10.4	8.6	10.3
Silver Creek	2/26	6	1.8	2.0	1.1
Silver Creek Pillow(S)	2/27	34	8.4	--	--
Silver Creek Pillow(M)	--	--	--	--	--
State Line (Calif.) *	2/26	26	6.5	4.0	7.1
Strawberry	2/24	29	7.3	5.0	5.9 <sup>b</sup>
Strawberry Pillow(S)	2/24	27	6.8	--	--
Strawberry Pillow(M)	--	--	--	--	--
Summer Rim *	2/26	41	10.2	14.4	12.0 <sup>b</sup>
Summer Rim	2/27	51	13.8	13.8	14.0
Summer Rim Pillow (T)	2/27	--	8.9	--	--
Summer Rim Pillow (S)	2/27	42	10.0	--	16.1 <sup>b</sup>
Summer Rim Pillow (M)	2/27	--	10.6	--	8.3 <sup>b</sup>
Sycan Flat *	2/26	21	6.1	5.0	5.6
HARNEY BASIN WATERSHEDS					
Blue Mountain Springs	2/22	58	14.8	14.4	14.2
Blue Mtn. Sprgs. Plw.(T)	2/28	--	18.6	--	--
Blue Mtn. Sprgs. Plw.(S)	2/22	56	17.5	16.0	15.1 <sup>b</sup>
Blue Mtn. Sprgs. Plw.(M)	2/22	--	17.0	18.2	11.3 <sup>b</sup>
Buck Pasture *	3/2	27	7.6	3.4	2.3
Buckskin Lake *	3/2	5	1.4	--	0.3 <sup>b</sup>
Call Meadows *	3/2	27	7.0	6.9	3.7
Delintment Lake	e	--	--	--	7.0 <sup>b</sup>
Denio Creek *	3/2	7	2.0	0.8	0.7
Disaster Peak (Nev.)	2/27	45	13.5	15.9	11.6
Emigrant Butte	2/28	34	7.7	4.9	3.7 <sup>b</sup>
Fish Creek *	3/2	75	21.0	23.8	20.0
Fish Creek	2/27	78	23.2	27.4	20.5 <sup>b</sup>
Fish Creek Pillow(S)	2/27	79	23.2	--	22.4 <sup>b</sup>
Fish Creek Pillow(M)	--	--	--	--	28.6 <sup>b</sup>
Hart Mountain *	2/26	18	4.7	4.3	1.4
Idlewild Camp Alternate	2/28	32	6.2	4.9	4.6 <sup>b</sup>
Izee Summit	2/27	43	10.7	6.9 <sup>a</sup>	6.8
Lake Creek R.S.	2/26	47	12.0	9.0 <sup>a</sup>	9.0
Lake Creek R.S. Plw.(T)	2/27	--	11.0	--	--
Lake Creek R.S. Plw.(S)	2/26	49	12.5	11.0	--
Lake Creek R.S. Plw.(M)	2/26	--	9.1	--	--
Oregon Canyon *	3/2	24	6.7	5.0	4.4
Rock Spring	2/27	32	8.3	4.9 <sup>a</sup>	5.0
Rock Spring Pillow(S)	2/27	32	9.0	--	--
Rock Spring Pillow(M)	2/27	--	7.0	--	--
Silvies *	3/2	41	11.5	9.0	7.6
Silvies	2/27	48	15.1	13.4	9.8
Silvies Pillow (T)	2/27	--	20.7	--	--
Silvies Pillow (S)	--	--	--	--	--
Silvies Pillow (M)	2/27	--	23.8	18.3	19.3 <sup>b</sup>
Snow Mountain	2/26	54	14.8	14.6	11.3
Snow Mountain Plw.(T)	3/1	--	11.3	10.4	5.8 <sup>b</sup>
Snow Mountain Plw.(S)	2/26	44	11.3	14.6	11.3 <sup>b</sup>
Snow Mountain Plw.(M)	--	--	--	--	--
Starr Ridge	2/27	32	8.0	5.0	5.2
Starr Ridge Pillow(S)	2/27	35	9.5	--	--
Starr Ridge Pillow(M)	2/27	--	5.5	--	--
Stinking Water	2/26	13	3.9 <sup>a</sup>	3.7	2.4
Trout Creek *	3/2	36	10.1	11.5	6.7
"V" Lake *	3/2	30	8.4	9.6	6.1

(a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

# BASIC DATA SUPPLEMENT 2

MARCH 1, 1979

## SOIL MOISTURE

DRAINAGE BASIN and/or STATION		Profile (Inches)		Date of Survey	Soil Moisture (Inches)		
Name	Elevation	Depth	Capacity		This Year	Last Year	Average †
OWYHEE, MALHEUR WATERSHEDS							
Bear Creek (Nev.)	7800	72	16.8	Discontinued	--	--	
Big Bend (Nev.)	6700	48	16.7	Discontinued	14.8	--	
Blue Mountain Spring	5900	42	16.9	2/22/79	5.9	12.3	9.6
Mud Flat (Ida.)	5500	48	12.8	Discontinued	--	--	
Rodeo Flat (Nev.)	6800	42	11.0	Discontinued	3.9	--	
Taylor Canyon (Nev.)	6200	48	15.1	Discontinued	11.2	--	
BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS							
Blue Mountain Summit	5100	36	16.8	2/28/79	9.6	15.0	11.5
Dooley Mountain	5430	36	9.2	2/26/79	2.8	3.7	4.1
Emigrant Springs	3925	48	22.3	2/28/79	16.4	21.4	19.7
Ladd Summit	3730	48	18.9	3/2/79	11.4	12.3	11.1
Moss Springs	5850	36	25.8	2/28/79	14.0	15.0	14.4
Tollgate	5070	48	23.6	2/28/79	15.4	14.0	17.3
UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS							
Battle Mountain Summit	4340	48	13.8	2/28/79	13.5	13.5	13.0
Emigrant Springs	3925	48	22.3	2/28/79	16.4	21.4	19.7
Tollgate	5070	48	23.6	2/28/79	15.4	14.0	17.3
UPPER JOHN DAY WATERSHEDS							
Battle Mountain Summit	4340	48	13.8	2/28/79	13.5	13.5	13.0
Blue Mountain Spring	5900	42	16.9	2/22/79	5.9	12.3	9.6
Blue Mountain Summit	5100	36	16.8	2/28/79	9.6	15.0	11.5
Derr	5670	24	9.0	2/27/79	5.8	8.9	7.9
Marks Creek	4540	36	14.1	N/R		11.2	11.9
Snow Mountain	6300	48	16.7	2/28/79	11.7	12.9	13.4
Starr Ridge	5150	36	10.6	2/27/79	7.7	10.6	9.7
UPPER DESCHUTES, CROOKED WATERSHEDS							
Derr	5670	24	9.0	2/27/79	5.8	8.9	7.9
Marks Creek	4540	36	14.1	N/R		11.2	11.9
Snow Mountain	6300	48	16.7	2/28/79	11.7	12.9	13.4
KLAMATH WATERSHEDS							
Quartz Mountain	5230	48	15.3	2/27/79	7.3	9.2	8.5
LAKE COUNTY, GOOSE LAKE WATERSHEDS							
Camas Creek	5720	42	14.5	2/28/79	11.0	12.7	12.3
Quartz Mountain	5230	48	15.3	2/27/79	7.3	9.2	8.5
HARNEY BASIN WATERSHEDS							
Blue Mountain Spring	5900	42	16.9	2/22/79	5.9	12.3	9.6
Silvies	6900	48	16.4	2/27/79	12.4	--	13.9
Snow Mountain	6300	48	16.7	2/28/79	11.7	12.9	13.4
Starr Ridge	5150	36	10.6	2/27/79	7.7	10.6	9.7
Willow-Bald	5000	24	6.6	2/28/79	4.7	6.3	5.5

(a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.



# BASIC DATA SUPPLEMENT 3

MARCH 1, 1979

## PRECIPITATION (Inches)

DRAINAGE BASIN and PRECIPITATION GAGE LOCATION	ELEVATION	CURRENT INFORMATION		PAST RECORD	
		Date of Reading	Precipitation	Last Year	Average <sup>†</sup>
Arbuckle Mountain (Morrow County)	5400	From 1/26 to 3/2	6.75"		
Billie Creek Divide (Jackson County)	5310	From 1/29 to 2/26	5.76"		
Blue Mt. Springs (Grant County)	5900	From 1/30 to 2/22	6.37"		
Bourne (Baker County)	5800	From 1/25 to 3/5	9.12"		
Bowman Springs (Union County)	4580	From 1/26 to 3/2	4.25"		
Cascade Summit (Lane County)	4880	From 1/31 to 2/28	12.00"		
Chemult (Klamath County)	4760	From 1/31 to 2/28	4.44"		
Clear Lake (Wasco County)	3500	From 1/29 to 2/26	9.48"		
Cold Springs (Klamath County)	6100	From 2/1 to 3/2	11.16"		
County Line (Umatilla County)	4800	From 1/29 to 3/1	3.36"		
Diamond Lake (Douglas County)	4600	From 1/29 to 2/23	15.08"		
Emigrant Springs (Umatilla County)	3925	From 1/26 to 2/28	6.96"		
Fish Creek (Harney County)	7900	From 11/2 to 2/27	21.24"		
Fish Lake (Jackson County)	4665	From 1/29 to 2/28	5.16"		
Fourmile (Klamath County)	6000	From 1/29 to 2/28	6.60"		
Gold Center (Grant County)	5340	From 1/25 to 3/1	6.36"		
Greenpoint (Hood River County)	3200	From 1/26 to 2/28	17.16"		
High Ridge (Umatilla County)	4150	From 1/26 to 2/27	10.20"		
Hogg Pass (Jefferson County)	4755	From 1/29 to 2/28	18.60"		
Hyatt Prairie (Jackson County)	4900	From 1/31 to 2/28	4.32"		
Irish-Taylor (Deschutes County)	5500	From 1/31 to 2/27	11.04"		
Lake Creek (Grant County)	5120	From 1/30 to 2/26	7.56"		

(a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.

# BASIC DATA SUPPLEMENT 3

MARCH 1, 1979

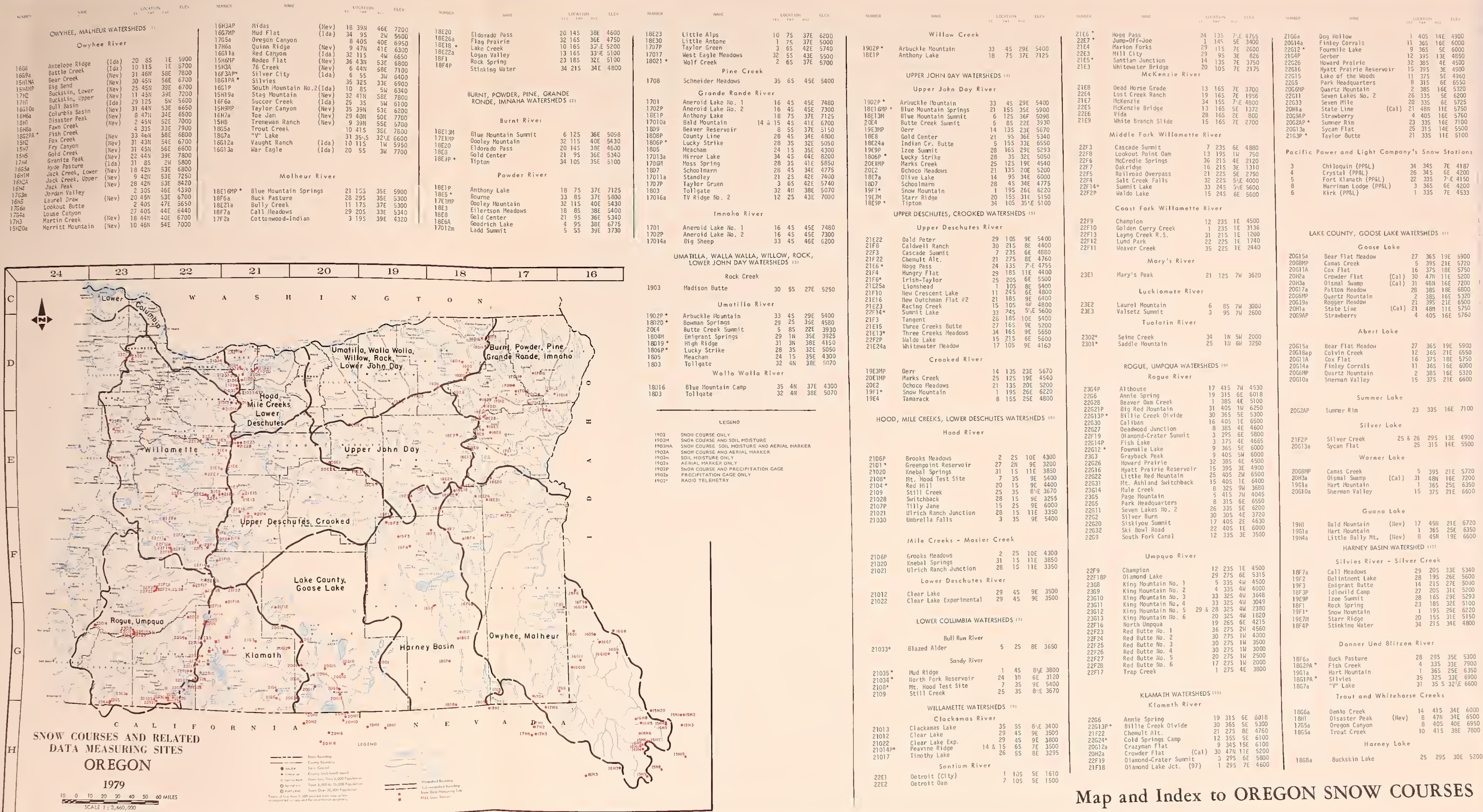
## PRECIPITATION (Inches)

DRAINAGE BASIN and PRECIPITATION GAGE LOCATION	ELEVATION	CURRENT INFORMATION		PAST RECORD	
		Date of Reading	Precipitation	Last Year	Average <sup>†</sup>
Lucky Strike (Umatilla County)	5050	From 1/26 to 3/2	4.75"		
Madison Butte (Morrow County)	5250	From 1/26 to 3/2	3.96"		
Marion Forks (Linn County)	2730	From 1/29 to 2/28	14.52"		
Marks Creek (Crook County)	4540	From 1/29 to 2/28	4.50"		
Mt. Hood Test Site (Clackamas County)	5400	From 1/31 to 3/1	14.87"		
Mud Ridge (Clackamas County)	3800	From 1/30 to 2/28	13.08"		
New Crescent Lake (Klamath County)	4800	From 1/29 to 2/28	7.44"		
Railroad Overpass (Lane County)	2750	From 1/31 to 2/28	8.64"		
Rock Springs (Grant County)	5100	From 1/31 to 2/27	3.60"		
Santiam Junction (Lane County)	3750	From 1/31 to 2/27	16.80"		
Schneider Meadows (Baker County)	5400	From 1/26 to 3/2	5.76"		
Seven Mile (Klamath County)	5725	From 1/24 to 3/1	11.76"		
Starr Ridge (Grant County)	5156	From 1/31 to 2/27	2.88"		
Summit Lake (Klamath County)	5600	From 1/29 to 2/28	15.00"		
Taylor Butte (Klamath County)	5040	From 1/31 to 2/28	6.00"		
Taylor Green (Baker County)	5740	From 1/29 to 3/2	7.68"		
Three Creek Meadows (Deschutes County)	5650	From 1/26 to 2/26	7.32"		
Tipton (Baker County)	5100	From 1/25 to 2/28	4.80"		
Beaver Reservoir (Union County)	5120	From 1/26 to 2/26	6.50"		
Big Red Mountain (Jackson County)	6500	From 1/29 to 2/22	11.28"		
Silvies (Harney County)	6000	From 11/2 to 2/27	6.96"		

(a) Estimated. (b) 1963-77 adjusted average. (c) 1963-77, 15 year average. (d) Corrected to natural flow. (e) Not scheduled.







Map and Index to OREGON SNOW COURSES





# The Following Organizations Cooperate in the Oregon Snow Survey Work

## STATE

- Idaho Cooperative Snow Surveys
- Nevada Cooperative Snow Surveys
- Oregon State University
- Oregon Department Of Water Resources
- Soil and Water Conservation Districts of Oregon

## COUNTY

- Douglas County Water Resources Survey

## FEDERAL

- Department of Agriculture
  - Cooperative Extension Service
  - Forest Service
  - Soil Conservation Service
- Department of Commerce
  - NOAA, National Weather Service
- Department of the Interior
  - Bonneville Power Administration
  - Bureau of Land Management
  - Bureau of Reclamation
  - Fish and Wildlife Service
  - Geological Survey
- Department of National Defense
  - Corps of Army Engineers

## PUBLIC UTILITIES

- Pacific Power and Light Company
- Portland General Electric Company
- California-Pacific National

## MUNICIPALITIES

- City of Baker
- City of La Grande
- City of Portland
- City of The Dalles
- City of Walla Walla

## IRRIGATION DISTRICTS

- Arnold Irrigation District
- Associated Ditch Companies
- Burnt River Irrigation District
- Central Oregon Irrigation District
- East Fork Irrigation District
- Grants Pass Irrigation District
- Hood River Irrigation District
- Jordan Valley Irrigation District
- Juniper Flat Irrigation District
- Lakeview Water Users, Incorporated
- Medford Irrigation District
- Middle Fork Irrigation District
- North Board of Control - Owyhee Project
- North Unit Irrigation District
- Ochoco Irrigation District
- Rogue River Valley Irrigation District
- South Board of Control - Owyhee Project
- Squaw Creek Irrigation District
- Talent Irrigation District
- Tumalo Project
- Vale - Oregon Irrigation District
- Warm Springs Irrigation District

## PRIVATE ORGANIZATIONS

- The Crag Rats, Hood River, Oregon

UNITED STATES DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE  
1220 S.W. THIRD AVE.  
PORTLAND, OREGON 97204

OFFICIAL BUSINESS  
PENALTY FOR PRIVATE USE, \$300

Return this entire sheet to above address, if you do NOT wish to receive this material ☐, or if change of address is needed ☐ (indicate changes in address below, including ZIP code).



POSTAGE AND FEES PAID  
U. S. DEPARTMENT OF  
AGRICULTURE  
AGR-101

FIRST CLASS MAIL

## FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

Furnishes the basic data  
necessary for forecasting  
water supply for irrigation,  
domestic and municipal water  
supply, hydro-electric power  
generation, navigation,  
mining and industry

*"The Conservation of Water begins  
with the Snow Survey"*

USDA NATIONAL AGRICULTURAL LIBRARY  
CURRENT SERIAL RECORD  
BELTSVILLE, MARYLAND 20705